SPIXIANA	18	3	267–270	München, 01. November 1995	ISSN 0341–8391

Bavarismittia reissi, gen. nov., spec. nov., a new orthoclad from Germany

(Insecta, Diptera, Chironomidae)

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Saether, O. A. (1995): *Bavarismittia reissi*, gen. nov., spec. nov., a new orthoclad from Germany (Insecta, Diptera, Chironomidae). – Spixiana **18/3**: 267-270

Bavarismittia reissi, gen. nov., spec. nov. is described as a male imago from Murnauer Moos in Bavaria, Germany. The genus differs from other orthoclad genera with bare eyes and squama, with sinuate Cu_1, and with no pulvilli and acrostichals by having no microtrichial tuft, moderately coarse punctation of microtrichiae, R_{4+5} ending opposite to end of M_{3+4}, broadly based, triangular anal point; and single, triangular virga. The genus may be related to *Mesosmittia* Brundin and related genera.

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Introduction

While, together with Dr. L. C. Ferrington Jr., revising the genus *Pseudosmittia* Goetghebuer several apparently related genera as well as specimens tentatively identified as belonging to the genus were examined. The genus *Pseudosmittia* previously was not well delimited and as a result several species were transferred to other genera, one genus resurrected, and several new genera erected. Most of the new genera were from the southern hemisphere. However, one of the new genera, *Lobosmittia* Sæther & Andersen (1993), also was found in Turkey, and one male imago which could not be placed in any known genus was present in material from Murnauer Moos in Bavaria, Germany. This new genus and species is described here.

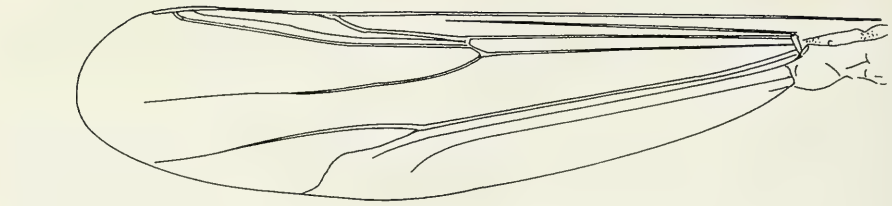
Methods and terminology

The general terminology follows Sæther (1980) with the additions given in Sæther (1990). In the drawing of the male hypopygium the dorsal view is shown to the left, the ventral view and the apodemes to the right. The holotype is returned to the Zoologische Staatssammlung, München, Germany.

Bavarismittia, gen. nov.

Type species: *Bavarismittia reissi*, spec. nov. by present designation.

Diagnostic characters. The genus differ from other orthoclads with bare eyes and squama, no pulvilli and sinuate Cu_1 by lacking any trace of acrostichals, median hump or microtrichial tuft; by having moderately coarse punctation of microtrichiae on the wing barely visible at 100×, R_{4+5} ending opposite to end of M_{3+4}; single, triangular virga, and anal point broadly triangular with downturned apex.



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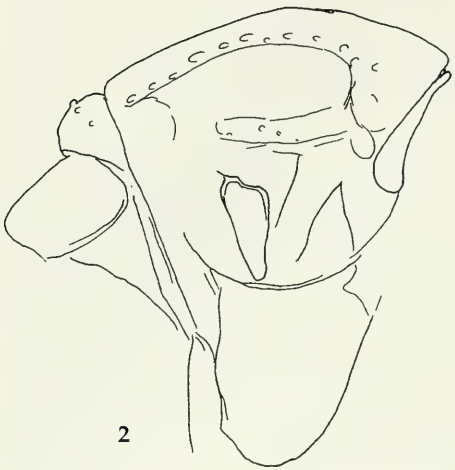

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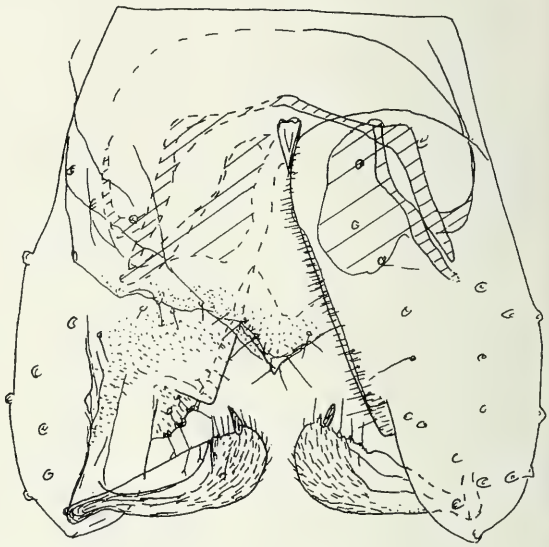

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Figs 1-3. *Bavarismittia reissi*, gen. nov., spec. nov. 1. Wing. 2. Thorax. 3. Hypopygium.

The pupa and larva are unknown.

Etymology. From Bavaria and *Smittia*, an orthoclad genus and the common ending for several orthoclad genera.

Description

Male imago. Small species (wing length about 1.5 mm).

Antenna. With 13 flagellomeres; groove starting on flagellomeres 3-4; flagellomere 2 and 3 each with 2 sensilla chaetica, 13 with about 14 sensilla chaetica and no subapical strong seta. Antennal ratio lower than 1.0.

Head. Eyes bare, rentiform, no dorsomedian extension. Temporals consisting of few inner and outer verticals and perhaps 1-2 postorbitals. Clypeus with few setae. Palp with 5 segments; third palpomere longer than fourth, with 1 lanceolate sensillum clavatum; fifth palpomere longer than third. Coronal suture complete.

Thorax. Antepronotum relatively well developed, with a few lateral setae. Acrostichals, median scutal hump or microtrichial tuft all absent; dorsocentrals few, uniserial; prealars few; supraalars absent. Scutellum with few setae in single, transverse row.

Wing. Membrane with moderately coarse punctation of microtrichiae visible at 100×, free of setae. Anal lobe absent, wing nearly cuneiform. Costa moderately extended, R_{2+3} running approximately in the middle between R_1 and R_{4+5}, ending close to R_{4+5}, R_{4+5} ends opposite to end of M_{3+4}, FCu lies clearly distally of RM, Cu_1 sinuate, postcubitus ends distally of FCu, anal vein ends below FCu. Brachiolum with 1 seta, other veins bare. Sensilla campaniformia in normal numbers (about 13 at base, 3 below setae and 13 at apex of brachiolum, 2 on subcosta, 1 on FR, and 1 at base of R_1). Squama bare.

Legs. Tibial spurs and combs normal. Pseudospurs absent, sensilla chaetica apparently absent (tarsi of mid leg lost). Pulvilli absent or vestigial, empodium large.

Abdomen. Tergites with few setae in an irregular anterior and an irregular posterior row. Sternites with a group of few median setae.

Hypopygium. Anal point extending from posterior margin of tergite IX, broadly based with blunt apparently downcurved apex, with setae and microtrichiae to apex. Phallapodeme well developed; transverse sternapodeme slightly curved, oral projections weak. Virga present, single, tapering to point. Gonocoxite with double, elongate inferior volsella, dorsal part angled and bare at apex; no superior and median volsellae. Gonostylus widest at apex, with rounded outer apical margin; crista dorsalis weak; megaseta normal, well developed.

Immature stages. Unknown.

Systematics

In the key to Holarctic chironomids (Cranston et al. 1989) *Bavarismittia* will key to *Psilometriocnemus* Sæther if the costa is regarded as strongly extended, to *Pseudosmittia*, except for the anal point, if regarded as moderately extended. However, none of these genera appear to be closely related to this new genus.

In *Psilometriocnemus* the anal point is parallel-sided with no microtrichiae at apex; the virga consists of 7-9 long, tightly clustered spines; the inferior volsella is square; crista dorsalis is conspicuous; and R_{4+5} ends distal to end of M_{3+4}; and at least vein R carries setae. However, there are agreement in several other characters such as the moderately coarse punctation of microtrichiae, and absence of acrostichals, pulvilli, pseudospurs and sensilla chaetica.

In *Pseudosmittia* the anal point, when present, never extends beyond the margin of tergite IX; there are either 2 or 4-16 median acrostichals on the scutum; the virga may consists of a single plate, but than the plate normally is of a different shape; and other details of the hypopygium differ.

The single virga and other details makes it most likely that the genus is related to genera near *Mesosmittia* Brundin (Sæther 1985). However, without knowledge of the female and the immatures a more definite placement is not possible.

Bavarismittia reissi, spec. nov.

Holotype: ♂, Germany: Bavaria, Murnauer Moos, Ramsach, Bruchwald beim Langen Kögel, 5.VI.1978, F. Reiss (Zoologische Staatssammlung München).

Diagnostic characters. See generic description.

Male imago (n=1). Total length: 2.62 mm; wing length: 1.53 mm. Total length/wing length: 1.72; wing length/length of profemur: 3.05. Coloration fully brown.

Head. AR 0.88. Ultimate flagellomere 397 µm long. Temporal setae obscured, apparently 4 inner verticals, 2 outer verticals, and 1 or 2 postorbitals. Clypeus with about 6 setae. Tentorium 120 µm long, 30 µm wide. Stipes 113 µm long. Palp lengths (micrometers): 28, 41, 79, 68, 98.

Thorax (Fig. 1). Chaetotaxy obscured by dirt. Antepronotum with about 3 lateral setae. Dorsocentrals 12, prealars about 4. Scutellum with about 6 setae.

Wing (Fig. 2). VR 1.26. C extension 45 µm long.

Legs. Spur of front tibia 49 µm long, spurs of middle tibia 19 µm and 17 µm long, of hind tibia 41 µm and 21 µm long. Width at apex of front tibia and middle tibia each 30 µm, of hind tibia 38 µm. Comb with 11 setae, 19-38 µm long. Lengths and proportions of legs:

	fe	ti	ta_1	ta_2	ta_3	ta_4	ta_5	LR	BV	SV	BR
p_1	501	619	255	156	109	57	47	0.41	3.73	4.39	3.3
p_2	595	605	–	–	–	–	–	–	–	–	–
p_3	581	624	340	170	156	61	57	0.55	3.48	3.54	5.4

Hypopygium (Fig. 3). Tergite IX including anal point with 12 setae, laterosternite IX with 5 setae. Phallapodeme 73 µm long, transverse sternapodeme 83 µm long. Virga 26 µm long. Gonocoxite 180 µm long, with divided, well developed, but low inferior volsell; dorsal part with bluntly angled apex,

without microtrichia. Gonostylus 83 µm long, megaseta 11 µm long. HR 2.18, HV 3.15.

Etymology. Named in honour of my friend and colleague Dr. Friedrich Reiss, Zoologische Staatssammlung München.

Acknowledgement

I am indebted to Dr. F. Reiss, Zoologische Staatssammlung München, Munich/Germany, for the loan of the holotype of *Bavarismittia reissi*.

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